MATERIALS

Goals

State Revenues. Establish a stable source of state revenues and provide an economical source of materials for development of public facilities.

Economic Development. Provide materials that can be used for development to help provide stable job opportunities and allow development of other industries.

Environmental Quality and Heritage Values. When developing material resources, protect the integrity of the environment and affected heritage resources to the extent feasible and prudent.

Management Guidelines

A. Preferred Material Sites. Altering streams can cause significant negative effects on other resources and lands. Therefore, to the extent feasible and prudent, DNR will give preference to using upland material sources in any ownership when responding to a request for a material sale or identifying a source for materials on public lands. Rivers in the Northwest area are important for fisheries, public use, and transportation. Extracting materials from wetlands, lakes, and active or inactive floodplains of rivers or streams should be avoided unless no feasible public upland alternative exists. Sales or permits for sand, silt, or gravel extraction will not be permitted in fish spawning areas identified by DF&G unless extraction would enhance the site for rearing and the activity is agreed to by DF&G.

B. Material Extraction From Floodplains. If the only feasible and prudent source of gravel is a floodplain of a stream or river, or a site is desirable for fisheries production, the following guidelines will be used to minimize negative impacts of material extraction on other resources and uses.

1. To the extent feasible and prudent, sand and gravel will be extracted from the following river configurations in the order of highest to lowest preference: braided, split channel, meandering, sinuous, and straight. When possible, exposed sand and gravel bars in broad, active floodplains will be considered for extraction. In general, extraction from larger rivers is preferred over smaller rivers because of the reduced potential for impacts to the river hydraulics and floodplain.

2. To the extent feasible and prudent, changes to channel hydraulics will be avoided.

3. Sand and gravel pits will be located to minimize the probability of channel diversion through the site.

4. The effects of sand and gravel removal will be minimized by maintaining buffers between active channels and the work area and by avoiding instream work, unnecessary clearing of riparian vegetation, and disturbance to natural banks.

5. To the extent feasible and prudent, site configurations will avoid the use of long straight lines and will be shaped to blend with physical features and surroundings to provide for diverse riparian and aquatic habitats.

6. If the work area may be inundated by high water during the period of operation, temporary dikes will be constructed around the site to segregate the work area from active channels and avoid the entrapment of fish.

7. Removal of sand and gravel from floodplains of fishbearing streams will not adversely impact spawning or overwintering habitat.

8. When gravel washing operations occur in the floodplain, settling ponds will be used to remove suspended materials from the wash water; settling ponds will be adequately diked or set-back from active channels to avoid breaching by a 10-year frequency flood. Wash water will be recycled or other appropriate mining technologies will be utilized so that the effluent discharge complies with state and federal water quality regulations.

9. Whenever possible, avoid vegetated habitats.

10. When small quantities of gravel are required (up to 50,000 cubic yards), sites should be

selected that have only unvegetated gravel deposits.

11. When large quantities of gravel are required (generally over 50,000 cubic yards), large rivers that contain sufficient gravel in unvegetated areas or terrace locations on the inactive side of the floodplain should be selected and mined by pit excavation.

12. If mining in vegetated areas, where feasible and prudent, vegetation and debris will be saved for site rehabilitation to facilitate vegetative recovery. This material should be piled or broadcast so that it will not be washed downstream.

13. When uplands adjacent to extraction sites located on river bars are not state-owned, extraction or use of the upland site above the ordinary high water mark will only be conducted with the permission of the upland owner.

14. To the extent feasible and prudent, DNR will avoid authorizing gravel extraction at sites that are in direct conflict with traditional activities such as, but not limited to, fish camps, fish wheels, net drying sites, and set-net locations. This will be accomplished by directing applicants to use alternate sites or stipulating that extraction occur at times that will not overlap with the conflicting use.

15. Stationary fuel storage facilities and unattended storage of fuel, lubricants, or other hazardous substances shall not occur within the active floodplain.

C. Maintaining Other Uses and Resources When Siting and Operating Material Sites. Before materials are extracted, the manager will ensure that the requirements of the permit or lease adequately protect other important resources and uses such as existing water rights, water resource quantity and quality, navigation, fish and wildlife habitat and harvest, commercial forest resources, recreation resources and opportunities, historic and archaeological resources, adjacent land uses, and access to public or private lands. The disposal of materials should be consistent with the applicable management intent statement and management guidelines of the plan.

The manager should also determine if other existing material sites can be vacated and rehabilitated as a result of opening a new material site.

D. Land Sales in Areas of High Material Potential. See *Settlement* Guideline C-6, page 2-31.

E. Screening and Rehabilitation. Where topography and vegetation allow, material sites should be screened from roads, residential areas, recreational areas and other areas of significant human use. Sufficient land should be allocated to the material site to allow for such screening. Where appropriate, rehabilitation of material sites will be required. For additional guidelines affecting material extraction see *Subsurface Resources* Guidelines B and C, page 2-45.

F. Mouths of Anadromous Streams and Enclosed Estuaries. See *Fish and Wildlife Habitat* Guideline J, Page 2-8.

G. Other Guidelines Affecting Materials. A number of other guidelines may affect materials management. See the following sections of this chapter:

Coordination and public notice
Fish and wildlife habitat
Heritage resources
Public access
Public and commercial recreation
Subsistence activities and traditional uses
Subsurface resources
Transportation and utilities

Land Allocation Summary

Due to ongoing development and maintenance of roads, airstrips, seawalls, harbors, boat landings and general construction in the plan area, there is a continuing demand for materials (sand, gravel, riprap, building stone). Close to communities, where demand for materials is greatest, most upland sources are owned by Native corporations or other private land owners. State-owned material sources are often along rivers and in the floodplain. Upland sand and gravel extraction sites are preferred over sites located along streams or in wetlands. A study has been done by Maniilaq Association for the Department of Transportation and Public Facilities which inventories material sources near communities in the NANA region.

State land will continue to be available for material extraction subject to guidelines of the plan.